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10/563,030	05/18/2006	Roland Steffen	0102-1035	3912

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EXAMINER	
AKBAR, MUHAMMAD A	
ART UNIT	**PAPER NUMBER**
2618	
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09/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,030	STEFFEN ET AL.	
	Examiner	Art Unit	
	Muhammad Akbar	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendments filed on 06/25/2007 have been entered. Claims 1-10 are pending in this application. Claim 1 has been amended.

Response to Arguments

2. Applicant's arguments with respect to claim(s) 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim(s) 1,2,5,6,7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiler et al (U.S. Patent No. 5,970,395) and in view of Vassiliou et al (U.S. Pub. No. 2004/0106380 A1).

Re claim 1, Weiler discloses a high-frequency interference signals measuring system (see abstract) for measuring a radiation frequency of portable computer (15 of fig.4) i.e. device under test, comprising:

a central monitoring unit (5 of fig.5) (i.e. measuring-device unit) and at least one high-frequency module (3A to 3N) (i.e. plurality of receiver unit) and each receiver unit (i.e. each high-frequency module) is placed separately from the central monitoring unit (5) (i.e. measuring-device unit) and each high-frequency receiver module comprises bus transmitting unit (19 of fig.5) which is connected to the monitoring unit (5) via digital data bus (4 of fig.5) (i.e. digital interface) for transmitting data from the central monitoring unit

(5) to the receiver (3A...3N) (i.e. at least one of the high frequency module) (see abstract, fig. 4-5,col.3 lines 5-9 , col.3 lines 56-67 and col.4 lines10-32);

processing input data *originating from central monitoring unit (5) (i.e. measuring-device unit)* in the receiver unit (3) wherein scanning data (i.e. process received data and form a bit stream (digital form) for transmission) and evaluates the received interference signal and send to the monitoring unit (5) through bus transmitting unit (19) via digital data bus line (4) (see fig.4,5 and col.4 lines 53-67,col.5 lines 10-32,col.6 lines23-33).

But failed to disclose explicitly of I-Q (inphase and quadrature phase) level in the measuring device unit, or digitized intermediate –frequency signal is transmitted via the digital interface. However, Vassiliou teaches method and apparatus for direct conversion transceiver enabling digital calibration of radio frequency (same field of endeavor) wherein system comprises RF receiver component (30 of fig.1), transmitter (32 of fig.1) and processor unit (18 of fig.1) and digital interface (48 of fig.1); Vassiliou further teaches the receiver unit (30) received data from antenna (12 of fig.1) and process the signal wherein signal is separated to inphase (I) and quadrature (Q) phase i.e. I-Q phase (38a and 38b of fig. 1) and passes to processor for converting (leveling I and Q signal) (see fig.1 and para[0037] and [0040]); or transceiver unit (16 of fig.1) transmit digitized intermediate frequency(IF) to the calibration apparatus (20 of fig.1) through processor unit (18) via digital interface (48 of fig.1) (see fig.1 and para[0045],[074]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the high frequency signal measurement system comprises device under test (computer), a central monitoring unit i.e. measuring-device unit and at least one high-frequency module which is separated from the central monitoring unit and connected to the monitoring unit via digital data bus (as taught by Weiler) by incorporating transceiver processor for separating I-Q phase which can be transmitted to the calibration apparatus and transceiver also can transmit baseband or digitized intermediate frequency (IF) signal via digital interface (as taught by Vassiliou) to obtain more accurate performance of frequency measurement system by using digital calibration method and multi path transmission system.

Re claim 2, as discussed above with respect to claim 1, Weiler further discloses the high-frequency receiver module (3 of fig. 5) comprises a bus transmitter unit (19 of fig.5) i.e. transmitter device and/or a bus receiver unit (20 of fig.5) i.e. receiver device for communication with a portable computer (15 of fig.4) i.e. device under test via antenna (17 of fig. 5).

Re claim(s) 5 and 6, as discussed above with respect to claim 1, Weiler further discloses the high-frequency measuring system used digital interface is an optical interface and electrical interface (see col.2 lines 33-41).

Re claim 7, as discussed above with respect to claim 1, Weiler furthermore discloses the high-frequency measuring system comprises portable computer (15 of fig.4) i.e. device under test [frequency module] wherein supplying power independently from monitoring unit (5) through power cable (16 of fig.4) [Moreover, every receiver component essentially provided an electrical energy through power supply for it's operation].

Re claim 10, as discussed above with respect to claim 1, Weiler further discloses the high-frequency measuring system comprises receiver unit (3) wherein scanned, evaluated [i.e. received signal standardized in the frequency scanner to form a digital data for standardized transmitting through digital data interface] received signal from the antenna for checking the threshold value level by the frequency scanner (18 of fig.5) and provided data to the bus transmitting unit (19 of fig.5) via digital bus interface (4) to the monitoring unit (5) wherein a level matrix (21 of fig.5), an interference computer (22 of fig.5) and scanning control unit (23 of fig.5) processed and sampled the data according to the threshold values and calculated the frequency interference level. But Weiler does not disclose explicitly that received signal converted into the digital data. However, Vassiliou teaches the receiver component connected to the analog to digital converter (38a 38 b of fig.1) wherein received signal converted to the digital data for transmission through digital interface (48 of fig.5) to the calibration unit.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the high frequency signal measurement system

comprises high-frequency receiver module wherein signal scanned and evaluated for transmission to the central monitoring unit via digital bus interface (as taught by Weiler) by incorporating analog to digital converter in the receiver module for digitized the data for transmission (as taught by Vassiliou) to improve the data transmission system by using digitized data for transmitting to the central monitoring unit for accurate test result.

7. Claim(s) 3,4,8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiler as modified by Vassiliou as applied to claim 1 above and further in view of Agilent PNA Network Analyzers (NPL documents: priority date September 25,2002).

Re claim 3,4,8 and 9, as discussed above with respect to claim 1, Weiler further discloses the high-frequency measuring system comprises receiver unit (3 of fig.5) is connected with monitor unit (5)(see fig.4-5)[transmitter bus unit (19 of fig.5) is connected to the scan input (24 of fig.5) and scanning control unit (24 of fig.5) is connected to the bus receiver unit (20 of fig.5) via digital data interface (4 of fig.5) which is serial interface]; and Weiler further discloses multiple receivers (3A to 3N) are connected to the data bus line (4 of fig. 4) via parallel interface (see fig.3-4 and col.3 lines 40-47); and transmitter bus unit (19) is connected to the scan input (24) and scanning control unit (24) is connected to the bus receiver unit (20) via digital data interface (4 of fig.5)

But Weiler does not disclose explicitly that interface is serial and parallel (although, it is an obvious for any test measurement/network analyzers ports have been provided serial or parallel interface).However, Standard documents of Agilent PNA

Network Analyzers (RF and microwave frequency measurement device wherein high RF frequency, antenna measurement and frequency calibration performed by network analyzers) teaches connectivity of network analyzers uses variety (i.e. multiple ports) input/output interfaces including universal serial bus, LAN and parallel connections; and plurality of ports can be seen both side of front view of the analyzers are identical; and plurality of different ports are used in the network analyzers (measurement devices) for digital interface(see all figures @ page 8 standard features).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the high frequency signal measurement system comprises a central monitoring unit connected to the high-frequency receiver module via digital data bus (as taught by Weiler) by incorporating transceiver processor for separating I-Q phase which can be transmitted to the calibration apparatus (as taught by Vassiliou) by including serial and parallel interface which are some identical and some are different ports for using interface as taught by standard documents of Agilent PNA Network Analyzers to obtain more clear signal, error free to use probe for connection (since some ports are identical) and good adaptability (using digital interface) of the measuring devices.

Conclusion

8. The amendment necessitated the new ground(s) of rejection presented in this office action. Accordinggly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a).

9. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Muhammad Akbar whose telephone number is (571)-270-1218. The examiner can normally be reached on Monday- Thursday (7:30 A.M.-5:00P.M).If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lana Le can be reached on 571-272-7891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lana M. Le
9-27-07

MA

LANA LE
PRIMARY EXAMINER